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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,814	07/10/2001	Lassi Hippelainen	975.348USW1	7875

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EXAMINER

GYORFI, THOMAS A

ART UNIT PAPER NUMBER

2135

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/901,814

Applicant(s)

HIPPELAINEN, LASSI

Examiner

Tom Gyorf

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-14, 16, 17, 19-29 and 31-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-14, 16, 17, 19-29 and 31-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 2-14, 16, 17, 19-29, and 31-35 remain for examination. The correspondence filed 12/05/05 amended claims 14, 21, 31, 33, and 34; and cancelled claim 15.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/13/06 has been entered.

Response to Arguments

3. Applicant's arguments filed 12/05/05 (resubmitted 1/13/06) have been fully considered but they are not persuasive.

4. In response to applicant's arguments against the references individually, particularly Applicant's argument regarding Bussey not disclosing that transmitting fake packets with intercepted packets (see page 17, lines 3-6 of the amendment), one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208

USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant further argues, *"However, neither of the cited references mention, discloses, or suggests that the total load of packets are transmitted to the interception gateway is constant, as recited in claim 14 and similarly recited in claim 21"*. Examiner disagrees with this contention, as Bussey clearly states that for proper network operation all packets are transmitted at a constant rate of one packet per port per cycle; this would necessarily include the intercepted packets and any fake packets involved. In fact, it is precisely because Bussey uses fake packets that the total load of packets transmitted through the switch remains constant.

Applicant further argues, *"Further, Applicants respectfully submit that there is no motivation to combine the cited references to disclose all of the features recited in the pending claims, because there is no motivation to combine the references other than that provided in the Applicants' disclosure, and the cited references fail to suggest the desirability of the cited combination."* Examiner disagrees with this contention. Dikmen discloses a means to sort through packet-based network traffic in order to intercept data in accordance with the dictates of a legal authority; this system requires the use of packet switches (e.g. col. 7, lines 35-50). Bussey discloses in more detail a type of packet switch for use in sorting networks that offers improved functionality over prior art switches in and of itself, by permitting full access, non-blocking, self-routing packet switch functionality without the use of additional, complex networks (col. 2, lines 45-50). Using a switch such as that disclosed by Bussey in the system disclosed by Dikmen would thus confer the benefits of the Bussey switch into the Dikmen system.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 2-3, 7-19, 21-28, and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dikmen et al. (U.S. Patent 6,577,865), and further in view of Bussey Jr. (U.S. Patent 4,797,880).

Referring to Claim 14:

Dikmen discloses an interception method for performing a lawful interception in a packet network, comprising the steps of:

a) providing a first network element having an interception function for intercepting data packets (col. 4, lines 35-55);

b) controlling said interception function by an interception control means implemented in a second network element (col. 4, lines 10-25); and

c) transmitting an intercepted data packet from said first network element via said packet network to an interception gateway element providing an interface to at least one intercepting authority (col. 6, lines 10-35).

Dikmen does not explicitly disclose "wherein said first network element generates fake packets to be transmitted with said intercepted data packets and the fake packets are transmitted from said first network element to said interception gateway element, wherein said fake packets are transmitted at random or triggered at any passing packet,

such that the total load of intercepted and fake packets transmitted to said interception gateway element is constant.”

Bussey discloses wherein said first network element generates fake packets to be transmitted with said intercepted data packets and the fake packets are transmitted from said first network element to said interception gateway element, wherein said fake packets are transmitted at random or triggered at any passing packet, such that the total load of intercepted and fake packets transmitted to said interception gateway element is constant (Bussey, col. 5, lines 50-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to create and transmit fake packets as part of the system disclosed by Dikmen. The motivation for doing so would be to incorporate a sorting network for improved efficiency into the Dikmen system, without requiring the use of a trap network and expander or banyan network (Bussey, col. 2, lines 20-50).

Referring to Claim 21:

Dikmen discloses an interception system for performing a lawful interception in a packet network, comprising:

a) a first network element having an interception function for intercepting data packets and comprising a transmitting means for transmitting an intercepted data packet to said packet network (col. 4, lines 35-55);

b) an interception control means implemented in a second network element and controlling the interception function (col. 4, lines 10-25); and

c) an interception gateway element having a receiving means for receiving said intercepted data packet and an interface means for providing an interface to at least one intercepting authority (col. 6, lines 10-35).

Dikmen does not explicitly disclose "wherein said first network element further comprises a means for generating fake packets to be transmitted with said intercepted data packets, wherein said fake packets are transmitted at random or triggered at any passing packet, such that the total load of intercepted and fake packets transmitted to said interception gateway element is constant."

Bussey discloses wherein said first network element further comprises a means for generating fake packets to be transmitted with said intercepted data packets, wherein said fake packets are transmitted at random or triggered at any passing packet, such that the total load of intercepted and fake packets transmitted to said interception gateway element is constant (col. 5, lines 50-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to create and transmit fake packets as part of the system disclosed by Dikmen. The motivation for doing so would be to incorporate a sorting network for improved efficiency into the Dikmen system, without requiring the use of a trap network and expander or banyan network (Bussey, col. 2, lines 20-50).

Referring to Claims 2 and 19:

Dikmen and Bussey disclose the limitations of Claims 14 and 21 above. Dikmen further discloses said interception gateway element is integrated in said second network element (Fig. 3; col. 5, lines 35-50).

Referring to Claims 3 and 22:

Dikmen and Bussey disclose the limitations of Claims 14 and 21 above. Dikmen further discloses a header of a data packet is read by said second network element and data packets to be intercepted are duplicated (col. 4, line 45-col. 5, line 15).

Referring to Claims 7 and 28:

Dikmen and Bussey disclose the limitations of Claims 14 and 21 above. Dikmen further discloses said first network element is provided in each network segment of said packet network (col. 4, lines 35-65).

Referring to Claim 8:

Dikmen and Bussey disclose the limitations of Claim 14 above. Dikmen further discloses received intercepted data packets are collected in said interception gateway element and supplied to an interface of said at least one intercepting authority (col. 5, lines 5-35).

Referring to Claim 9:

Dikmen and Bussey disclose the limitations of Claim 8 above. Dikmen further discloses said interface comprises a first interface for administrative tasks, a second interface for network signaling, and a third interface for intercepted user data (col. 1, lines 50-65; col. 4, lines 10-45).

Referring to Claim 10:

Dikmen and Bussey disclose the limitations of Claim 14 above. Dikmen further discloses said intercepting function comprises a packet sniffing and filtering function (col. 7, lines 20-30).

Referring to Claim 11:

Dikmen and Bussey disclose the limitations of Claim 10 above. Dikmen further discloses said intercepting function is implemented in the Gn interface (col. 7, lines 10-35).

Referring to Claim 12:

Dikmen and Bussey disclose the limitations of Claim 14 above. Dikmen further discloses said interception function comprises reading data packets, analyzing the header of the data packets as to whether the data packet should be intercepted or not, and transmitting the data packet to said interception gateway element, and a

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management function for interception and transmission criteria (col. 4, line 40-col. 5, line 15).

Referring to Claim 13:

Dikmen and Bussey disclose the limitations of Claim 14 above. Dikmen further discloses an alarm is transmitted to said interception gateway element and all interception information of a respective network element is deleted, when a breakage of a casing of the respective network element has been detected (col. 3, lines 40-50).

Referring to Claim 15:

Dikmen and Bussey disclose the limitations of Claim 14 above. Bussey further discloses wherein said fake packets are transmitted at random or triggered at any passing packet, such that the total load of intercepted and fake packets transmitted to said interception gateway element is constant (col. 5, lines 60-65).

Referring to Claims 16 and 23:

Dikmen and Bussey disclose the limitations of Claims 14 and 22 above. Dikmen further discloses said intercepted data packet is padded to a maximum length (col. 5, lines 1-2).

Referring to Claim 17:

Dikmen and Bussey disclose the limitations of Claim 14 above. Dikmen further discloses a time information is added to said intercepted data packet (col. 5, lines 1-2, 55-65).

Referring to Claim 24:

Dikmen and Bussey disclose the limitations of Claim 21 above. Dikmen further discloses said first network element is a gateway element of said packet network (col. 4, lines 35-55).

Referring to Claim 25:

Dikmen and Bussey disclose the limitations of Claim 21 above. Dikmen further discloses said first network element is a BG, an SGSN or a GGSN (col. 4, lines 35-50).

Referring to Claim 26:

Dikmen and Bussey disclose the limitations of Claim 24 above. Dikmen further discloses wherein an interception information defining a data packet to be intercepted is included in a context information supplied to said first network element and used for routing data packets (col. 4, lines 40-col. 5, line 15).

Referring to Claim 27:

Dikmen and Bussey disclose the limitations of Claim 26 above. Dikmen further discloses wherein said interception control means comprises a storing means for storing an interception list, and wherein said interception control means is arranged to add said interception information to said context information supplied to said first network element (col. 4, lines 25-60).

Referring to Claim 32:

Dikmen and Bussey disclose the limitations of Claim 21 above. Dikmen further discloses said first network element comprises a detecting means for detecting a malfunction and/or breakage thereof, and signaling means for signaling an alarm to said interception gateway element in response to an output of said detecting means (col. 3, lines 40-50; col. 5, lines 55-65).

Referring to Claim 33:

Dikmen discloses a network element for a packet network, comprising:

- a) an interception means for intercepting a data packet received from said packet network (col. 4, lines 10-25), and
- b) a transmitting means for transmitting said intercepted data packet via said packet network to an interception gateway element (col. 6, lines 10-35),
- c) wherein said interception means is controlled by an interception control means arranged in another network element (col. 4, lines 35-50).

Dikmen does not disclose "said network element further comprises a means for generating fake packets to be transmitted with said intercepted data packets and the fake packets are transmitted from said network element to said interception gateway element, and wherein said transmitting means transmits said fake packets at random or triggered at any passing packet, such that the total load of intercepted and fake packets transmitted to said interception gateway element is constant."

Bussey discloses said network element further comprises a means for generating fake packets to be transmitted with said intercepted data packets and the fake packets are transmitted from said network element to said interception gateway element, and wherein said transmitting means transmits said fake packets at random or triggered at any passing packet, such that the total load of intercepted and fake packets transmitted to said interception gateway element is constant (col. 5, lines 50-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to create and transmit fake packets as part of the system disclosed by Dikmen. The motivation for doing so would be to incorporate a sorting network for improved efficiency into the Dikmen system, without requiring the use of a trap network and expander or banyan network (Bussey, col. 2, lines 20-50).

7. Claims 4-6, 20, 29, 31, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dikmen and Bussey as applied to claims 14 and 21 above, and further in view of Aziz et al. (U.S. Pre-Grant Publication 2003/0037235).

Referring to Claim 4:

Dikmen and Bussey disclose the limitations of Claim 14 above.

Neither Dikmen nor Bussey explicitly disclose "intercepted data packet is transmitted to said interception gateway element using a secure tunnel".

Aziz discloses intercepted data packet is transmitted to said interception gateway element using a secure tunnel (paragraphs 0008-0009).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the teachings of Dikmen in view of Bussey such that the intercepted information is kept secure by using a tunnel. One of ordinary skill in the art would have been motivated to do this because it would provide a method to prevent unauthorized access (Dikmen: col. 7, lines 50-60).

Referring to Claim 5:

The combination of Dikmen, Bussey, and Aziz discloses the limitations of Claim 4 above. Aziz further discloses said secure tunnel is implemented by an encryption processing (paragraphs 0008-0009).

Referring to Claim 6:

Dikmen and Bussey disclose the limitations of Claim 14 above.

Neither Dikmen nor Bussey explicitly disclose "said intercepted data packet is transmitted via interworking units and encrypted between said interworking units, when

said first network element and said interception gateway element are arranged in separate network segments.”

Aziz discloses said intercepted data packet is transmitted via interworking units and encrypted between said interworking units, when said first network element and said interception gateway element are arranged in separate network segments. (Fig. 1; paragraphs 0008-0009, 0021)

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the teachings of Dikmen in view of Bussey such that the intercepted information is kept secure by using a tunnel. One of ordinary skill in the art would have been motivated to do this because it would provide a method to prevent unauthorized access (Dikmen: col. 7, lines 50-60).

Referring to Claim 20:

Dikmen and Bussey disclose the limitations of Claim 21 above.

Neither Dikmen nor Bussey explicitly disclose “said first network element further comprises an encrypting means for encrypting said intercepted data packet”

Aziz discloses said first network element further comprises an encrypting means for encrypting said intercepted data packet (Fig. 1; paragraphs 0008-0009, 0021).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the teachings of Dikmen in view of Bussey such that the intercepted information is encrypted. One of ordinary skill in the art would have

been motivated to do this because it would provide a method to prevent unauthorized access (Dikmen: col. 7, lines 50-60).

Referring to Claim 29:

Dikmen and Bussey disclose the limitations of Claim 21 above.

Neither Dikmen nor Bussey explicitly disclose "first network element comprises a control means for controlling interception and encryption processing in accordance with an interception setting instruction received from said interception control means"

Aziz discloses said first network element comprises a control means for controlling interception and encryption processing in accordance with an interception setting instruction received from said interception control means (Fig. 1; paragraphs 0008-0009, 0021).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the teachings of Dikmen in view of Bussey such that the intercepted information is encrypted. One of ordinary skill in the art would have been motivated to do this because it would provide a method to prevent unauthorized access (Dikmen: col. 7, lines 50-60).

Referring to Claim 31:

Dikmen discloses an interception system for performing a lawful interception in a packet network, comprising:

a) a first network element having an interception function for intercepting data packets and comprising a transmitting means for transmitting an intercepted data packet to said packet network (col. 4, lines 35-55);

b) an interception control means implemented in a second network element and controlling the interception function (col. 4, lines 10-25); and

c) an interception gateway element having a receiving means for receiving said intercepted data packet and an interface means for providing an interface to at least one intercepting authority (col. 6, lines 10-35), wherein said interception gateway element comprises a memory means for storing received intercepted data packets before supplying them to said interface means (col. 4, lines 50-60), an extraction means for extracting intercepted data packets [from fake data packets] (col. 2, lines 20-30), and a means for adding time information to said received intercepted data packets before storing them in memory (col. 5, lines 1-2, and 55-65).

Dikmen does not explicitly disclose the use of fake packets in the system, such that the total load of intercepted and fake packets is constant. However, Bussey discloses these limitations (col. 5, lines 50-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to create and transmit fake packets as part of the system disclosed by Dikmen. The motivation for doing so would be to incorporate a sorting network for improved efficiency into the Dikmen system, without requiring the use of a trap network and expander or banyan network (Bussey, col. 2, lines 20-50).

Neither Dikmen nor Bussey disclose a decryption means for removing an encryption of the received data packets.

Aziz discloses a decryption means for removing an encryption of the received intercepted data packets (paragraph 0010).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the ability to decrypt encrypted packets into the system disclosed by Dikmen. The motivation to do so would be to permit authorized access to intercepted packets (Dikmen, col. 7, lines 50-60).

Referring to Claim 34:

Dikmen discloses an interception gateway element for an interception system of a packet network, comprising:

a) a receiving means for receiving an intercepted data packet via said packet network from a network element having an interception function (col. 4, lines 25-65); and

b) an interface means for providing an interface to an intercepting authority (col. 6, lines 10-35); and

c) a memory means for storing received intercepted data packets before supplying them to said interface means (col. 4, lines 50-60), an extraction means for extracting intercepted data packets [from fake data packets] (col. 2, lines 20-30), and means for adding a time information to said received intercepted data packets before storing them in memory (col. 5, lines 1-2, 55-65).

Dikmen does not explicitly disclose the use of fake packets in the system, such that the total load of intercepted and fake packets is constant. However, Bussey discloses these limitation (col. 5, lines 50-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to create and transmit fake packets as part of the system disclosed by Dikmen. The motivation for doing so would be to incorporate a sorting network for improved efficiency into the Dikmen system, without requiring the use of a trap network and expander or banyan network (Bussey, col. 2, lines 20-50).

Neither Dikmen nor Bussey explicitly disclose "a decryption means for removing an encryption of the received intercepted data packets."

Aziz discloses a decryption means for removing an encryption of the received intercepted data packets (paragraph 0010).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the ability to decrypt encrypted packets into the system disclosed by Dikmen. The motivation to do so would be to permit authorized access to intercepted packets (Dikmen, col. 7, lines 50-60).

Referring to Claim 35:

Dikmen and Aziz disclose the limitations of Claim 34 above. Dikmen further discloses an interception control means for controlling said interception function of said network element (col. 4, lines 10-45).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

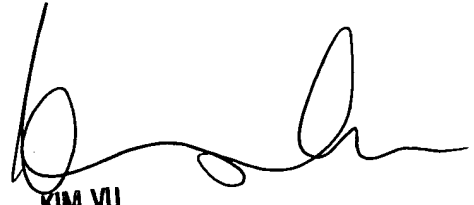
- U.S. Patent 6771597 issued to Makansi et al.
- U.S. Patent 6449282 issued to Loher, Urs
- U.S. Patent 4594706 issued to Kobayashi, Kazuomo

.Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom Gyorfi whose telephone number is (571) 272-3849. The examiner can normally be reached on 8:30am - 5:00pm Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on (571) 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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